

## II. REMARKS

### A. Introduction

The Office Action dated February 4, 1997 (Office Action) has been carefully reviewed and the foregoing amendments made in response thereto. All claims 2 through 8 are rejected under the judicially created doctrine of non-obviousness non-statutory double patenting over the patented claims in U.S. Patents 4,694,490; 4,704,725; 4,965,825; and 5,109,414; and copending U.S. application 08/113,329 and related U.S. applications numbered 1-327 in the Office Action (p. 17-20) , mailed on February 4, 1997. The Office Action generally rejects all pending claims 2-8 under 35 U.S.C. § 112, second paragraph, for indefiniteness. The Office Action again rejects claims 2-8 under 35 U.S.C. § 112, second paragraph, for various enumerated informalities. Claims 2, 5 and 6 are rejected under 35 U.S.C. § 112, first paragraph<sup>1</sup> as unsupported by an enabling disclosure. The specification is objected to under 35 U.S.C. § 112, first paragraph, for failure to provide an enabling disclosure with respect to the subject matter of claims 2-8, also rejected under the same provision. Claims 2-8 are rejected under 35 U.S.C. § 102 (e) for lack of novelty.<sup>1</sup>

Applicants have amended the claims to address the Examiner's concerns. In accordance with the foregoing, the pending claims have been amended to improve clarity, and further, to respond to certain rejections made by the Examiner arising under 35 U.S.C. § 112. The Examiner's comments on the claims are acknowledged and

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<sup>1</sup> The Office Action states that it is responsive to the preliminary amendment filed June 2, 1995, and the (first) supplemental amendment filed April 5, 1996. The Office Action is not responsive to the second supplemental amendment filed December 23, 1996, which added claim 9. Applicants will direct their remarks to the claims as they stood following the second supplemental amendment, including claim 9.

appreciated. No new matter is presented in the foregoing amendments. Approval and entry of same is respectfully requested.

Regarding paragraph 1 of the Office Action, it is noted that the examination is responsive to the Preliminary Amendment filed June 2, 1995, and (first) Supplemental Amendment filed April 5, 1996, but not the (second) Supplemental Amendment filed December 23, 1996. Applicants will, accordingly, direct their remarks and any amendment to the claims as they stand as of the last amendment.

Regarding paragraph 2 of the Office Action, Applicants respectfully point out that the Information Disclosure Statements filed for the subject application claim priority back to the application filed September 11, 1987, and issued as U.S. Pat. No. 4,965,825 on October 23, 1990. The present application claims priority under 35 U.S.C. § 120 of the following applications:

<u>Serial No.</u>	<u>Filing Date</u>	<u>Patent No.</u>
08/113,329	August 30, 1993	Pending
08/056,501	May 3, 1993	5,335,277
07/849,226	March 10, 1992	5,233,654
07/588,126	September 25, 1990	5,109,414
07/096,096	September 11, 1987	4,965,825

Consequently, the Applicants will demonstrate disclosure with respect to the "87 case", App. Ser. No. 96,096 and issued as U.S. Pat. No. 4,965,825. Applicants will address the rejections under 35 U.S.C. § 112 in section B below. Applicants will address the art rejections of the Office Action in sections C of the response. Applicants will address the nonstatutory nonobviousness type double patenting rejection in Section D below.

As to the paragraph numbered 3, Applicants acknowledge their duty to maintain a line of patentable demarcation between related applications. Assuming *arguendo* that substantially duplicate claims exist, the Applicants intend to make a good faith effort to alert the PTO of any instances in which the PTO treats such claims inconsistently.

As to the paragraph numbered 4, Applicants acknowledge and appreciate the Examiner's concern over the use of alternative claim language. Applicants believe that the disclosure supports every possible embodiment or permutation that can be created using said language. During the prosecution of this application, Applicants intend to ensure that the disclosure supports each possible embodiment as claimed using alternative claims.

As to paragraphs 5 through 13 of the Office Action, Applicants' views are fully discussed in Applicants' reply brief to the rejections in application number 08/113,329, hereby incorporated by reference. Applicants will not repeat portions the response which are identical in this application. Applicants will discuss those portions of the double patenting rejection that are specific to the present application in section D *infra*.

Paragraph 11 of the Office Action states that "determination of a possible non-statutory double patenting rejection obvious-type in each of the related 327 applications over each other will be deferred until a later time." (Office Action, p. 16, par. 11). Applicants submit that the Examiner and the PTO cannot defer further rejections to a later time. Every ground of rejection should be made in Examiner's first office action. Title 37 of the CFR states that "[o]n taking up an application for examination . . . the examiner shall make a thorough study thereof and shall make a thorough investigation

of the available prior art relating to the subject matter of the claimed invention. The examination shall be complete with respect to both compliance of the application . . . with the applicable statutes and rules and to the patentability of the invention as claimed, as well as with respect to matters of form, unless otherwise indicated.” 37 CFR § 1.104(a). The MPEP states “[t]he examiner’s action will be complete as to all matters, except that in appropriate circumstances, such as misjoinder of invention, fundamental defects in the application, and the like, the action of the examiner may be limited to such matters before action is made.” MPEP § 707.07, quoting 37 CFR § 1.105. Finally, “[p]iecemeal examination should be avoided as much as possible. The examiner ordinarily should reject each claim on all valid grounds available . . . Where a major technical rejection is proper, it should be stated with full development of reasons rather than by mere conclusion coupled with some stereotyped expression.” MPEP §707.07(g). Applicants submit that the Examiner has a duty to give each application a complete examination, that rejections be made with specificity, and that deferred rejections are not allowed. For these reasons, Applicants likewise traverse the rejection based on the “judicially created doctrine of double patenting over the claims of copending U.S. application 08/113,329 and the following [list of all applicants copending applications].” Applicants submit that this rejection, even if appropriately made with specificity, should be a provisional double patenting rejection. Applicants respectfully request that this rejection be withdrawn.

As to the paragraph related to the multiplicity rejection in parent file 07/096,096, Applicants submit that the PTO gave a multiplicity rejection in this case and limited

Applicants to twenty-five claims. Roughly one hundred claims had been originally filed. There was no substantive review of any of the other claims outside of the twenty five. Applicants were not permitted to submit additional claims although a request was made. The disclosure of Applicants address too many subject areas to be adequately covered by a small number of claims. Applicant submit that "nexus" analysis is not required by Applicants.

As to paragraphs 14-19, containing various rejections and objections under 35 U.S.C. § 112, Applicants have amended the pending claims to further the Examiner's understanding of the claimed subject matter. Applicants, where requested and where necessary, have provided citations to the specification to demonstrate enablement. Applicants submit that the claims, as amended, are distinct as well as properly described and fully enabled by the priority disclosure. Applicants will provide detailed remarks on the Examiner's specific objections and queries in section B *infra*.

As to paragraph 20's rejection of claims 2-8 under 35 U.S.C. §§ 102 (e), Applicants will demonstrate that the cited art is not prior art against the present application or, in the alternative, that each claim at issue is patentable over the cited references. Applicants will provide detailed argument on the art rejection in sections C *infra*.

As to the paragraph 21, Applicants acknowledge and appreciate the interviews provided by the PTO. Applicants also appreciate the detailed description of the interviews provided in the Office Action. The Office Action states that "the Group would like to have a complete grouping of applications in a manner that was submitted earlier for only a portion of the total filings." Applicants note that based on the Office

Actions received thus far, the PTO does not appear to be following the groupings applicants submitted previously. The order of examination of Applicants' applications do not seem to have any correspondence to the groupings previously submitted. Applicants, therefore, will not supply further groupings. Applicants will, however, gladly supply further groupings if requested by the PTO for the purpose of following these groupings. Mr. Groody has confirmed in a telephone conversation between Mr. Groody and Mr. Scott that no more groupings need be sent.

In the interest of maintaining a clear record, Applicants respectfully traverse the Office Action's interview summary statement that an offer was made to terminally disclaim the present application with the '81 or '87 patents. Rather, Applicants respectfully submit that their offer was to disclaim a block of copending applications against one another, provided their issue date was in close enough proximity so as not to result in unnecessarily great losses in patent term duration.

**B. Response to Rejections under 35 U.S.C § 112.**

**1. Introductory Remarks.**

Applicants have amended the pending claims in response to various of the Examiner's objections and queries. Applicants believe that all pending claims clearly define the metes and bounds of the claimed subject matter, and are supported by an adequate written description that is fully enabling. Applicants will address each paragraph of the Office Action regarding rejections and objections under 35 U.S.C. § 112.

Applicants respectfully request that paragraph 14's blanket rejection for indefiniteness be withdrawn since the Examiner is under a duty to review all claims and provide specific reasoning in support of specific rejections. However, in order to advance the prosecution of the present application, Applicants shall provide a summary of the pertinent disclosure including reference to examples supporting the claimed subject matter. Applicants will provide citations to the '87 case supporting the pending claims 2-9. The present application asserts priority on the disclosure of the '87 case, filed on September 11, 1987, as Ser. No. 96,096, and issued October 23, 1990, as U.S. Pat. No. 4,965,825 (hereinafter "the '87 case"). The disclosure of the '87 case is generally addressed to apparatus and methods for automatically controlling the transmission and presentation of information programming, including the application of embedded signaling for a number of functions, including the control over decryption and access, monitoring of usage/availability, control of external equipment, coordination of

multiple broadcasts, automated compilation and collection of billing data, and generation and presentation of combined media presentations of broadcast and locally-generated user specific content. The priority disclosure further discusses coordination and control of programming at several levels of the communications chain, including transmission stations, intermediate transmission stations, and receiver or subscriber stations. In their 1987 continuation-in-part specification, applicants disclose "an integrated system of programming communication" which encompasses many inventions and deliberately includes many embodiments. Their teaching technique is to introduce the principles of their integrated system in a series of *related* examples. Each example builds upon structure and principles introduced earlier. Examining basic principles in detail in early examples, enables the specification with concreteness to expand and extend the scope of the teaching in later examples.

Starting with "**One Combined Medium**" on page 19 which focuses on the creation and delivery of a receiver specific graph in a broadcast or cablecast television program, "Wall Street Week," the specification introduces concepts of personalization of mass media and broadcast control of receiver station computing equipment. At page 28 *et seq.* it describes apparatus that include signal processors and signal decoders and introduces the concept of a signal processor *system*. At page 40 *et seq.* it teaches the composition of signal information and the organization of message streams.

Then in a series of four **examples, #1 through #4** which begin on pages 108, 143, 162, and 197 respectively, the specification demonstrates how receiver stations communicate signal processor apparatus and methods ("*SPAM*") processor code and



data of the integrated system of programming communication to *some* apparatus they actuate, how decryption occurs, how metering and monitoring take place, and how actuated apparatus perform. Each example builds on concepts introduced earlier in the specification to provide a detailed teaching of its own subject matter, and a particularly important teaching occurs from pages 156 through 162 where the specification teaches the structure and operating capabilities of a *controller of a decoder*.

Building on all that precedes it, **example #5**, which begins on page 248, then relates how the integrated system processes a multichannel communications system, which conveys different types of signals, in order to monitor programming availability and enable receiver station apparatus to receive desired programming.

From pages 278 through 312, in **example #6** and especially **example #7**, which includes both digital and analog television signals and relates to the "Wall Street Week" program (and which has further disclosure at pages 427 through 447), the specification teaches regulating reception and use of programming of the integrated system of programming communication.

At page 312 *et seq.* it relates further monitoring concepts.

From page 324 through page 390 the specification teaches a series of transmitter station and transmitter network concepts. This portion of the specification also relies on all previous disclosure in that special attention is given to intermediate transmission stations which, *as receiver stations*, respond to programming transmissions of the integrated system as well as storing, organizing, generating, and transmitting programming. At page 340 *et seq.* **example #8** teaches distribution to, storage and

organization at, and retransmission from intermediate transmission stations ("*ITS*") of SPAM programming -- most specifically television spot commercials. At page 354 *et seq.* **example #9** teaches automating intermediate transmission station combined medium operations by describing how an intermediate transmission station responds to an intermediate generation set and other elements of the integrated system to generate processor code and data and transmit the code and data with SPAM programming -- spot commercial unit Q of example #8 -- all of which are subsequently shown in the specification to operate at receiver stations to deliver receiver specific programming at video monitors, speakers, printers, and transmitters (telephones which communicate to remote data collection stations). At page 374 *et seq.* **example #10** extends the transmitter and network automating concepts of examples #8 and #9 by disclosing *a plurality* of intermediate transmission stations generating processor code and data, in the fashion of example #9, and inserting different code and data into a *network originated* transmission of SPAM programming -- again the unit Q television spot commercial.

From page 390 through 516, the specification discloses further ultimate receiver station ("*URS*") automation concepts, including regulating the URS environment (page 396 *et seq.*), controlling multiple receivers and output devices to present coordinated output (page 406 *et seq.*), receiving selected programming of the integrated system (page 419 *et seq.*), certain *integrated system computer system concepts* (page 427 *et seq.*), whose **example #7** (page 427 *et seq.*) description relies on the receiving selected programming concepts of pages 419-427. At page 447 *et seq.* the specification discloses certain data maintenance, timing control, efficiency, and other concepts involved in controlling

combined media operations. At page 457 *et seq.* the specification discloses certain timing, imaging, communication, and transmission processing concepts that relate to efficient delivery of integrated system programming. At page 463 *et seq.* the specification relates to user specific audio, print, and other combined media besides receiver specific video.

With all this preparation, the specification teaches, from page 469 through page 516, the combined media presentation of **examples #9 and #10** at a plurality of ultimate receiver station (which are responding to signals sent by different intermediate transmission stations).

At page 516 *et seq.* the specification discloses enhancing and extending functionality of the integrated system by reprogramming receiver apparatus and enabling receiver stations to process transmissions having new forms of composition.

Finally, at page 533 *et seq.* the specification discloses "**Summary Example**" (#11) which teaches a very large scale integrated data processing and communications problem and its solution(s), using *all of* the disclosed integrated system with iterative broadcasting, response, and refinement.

Because of the integrated nature of the disclosure, no part of the specification is intended to be considered *in isolation*. Applicants provide the following citations to the priority disclosure as by way of example only to assist Examiner, and not to unnecessarily restrict the intended scope of the claims. The claims should be read as broadly as possible in light of the specification, and the proffered examples do not encompass all possible embodiments of the claimed inventions.

However, in the present application, the claims are generally directed to method of signal processing in a network including transmitter stations and receiver stations. Independent claim 2 is directed to a method for controlling a transmitter station with a first signal and receiver stations with a second signal generated as a result of the first signal. The first signal causes the transmitter station to select (1) mass medium programming and (2) data to be incorporated into control instructions, both of which are included in a second signal transmitted to receiver stations. The second signal causes the receiver station to store at least some of the data and present the mass medium programming and some output information to complete or supplement the mass medium programming. Independent claims 5, 6 and 8 are similar to claim 2. Independent claim 7 is directed to a similar concept, except the steps all take place at a receiver station. Independent claim 9 is directed to similar concepts, wherein (1) a signal with television or radio programming with an incomplete programming element and an identifier is stored; and (2) an intermediate generation set or program instruction set is stored, the set being operative to complete the incomplete programming element based on user input.

Regarding intermediate transmission stations (relevant to claims 5, 6, 8 and 9), the specification discusses methods for automating intermediate transmission stations, including combined medium operations (supplementary output) between pages 324 and 390. Pages 390 to 456 address the control of receiver station presentations, including combined media operations where broadcast-type programming is presented with supplementary output. The specification, at pages 471-475, 508-510, 535-537 and

556, discusses the concepts of subscriber station response or reaction to received programming, and the output of output information content as a result. Regarding "intermediate generation sets", the specification at pp. 42 and 356-357 define them as "instances of computer program information that cause intermediate transmission station apparatus to generate program instruction set information and/or command information". The element of intermediate generation sets is further discussed at pp. 358-398 and 541-556. The element of program instruction sets is defined at p. 24 as "a set of instructions that is loaded and run", and is extensively discussed in the specification at pp. 25-26, 42-53, 89-107, 215-276, 354-386, 448-516 and 542-554.

Applicants provide these specific embodiments in support of the pending claims by way of example only. The claims must be read as broadly as is reasonable in light of the specification, and Applicants in no way intend that their submission of excerpts/examples to assist the PTO be construed to unnecessarily restrict the scope of the claimed subject matter. Applicants will provide additional specification support in their detailed response to the Examiner's specific rejections provided *infra* in section B(2).

## **2. Remarks and Argument in Response to Examiner's Specific Objections.**

Applicants respectfully submit that present claims 2-9, as they presently stand, comply with 35 U.S.C. § 112, second paragraph, insofar as they particularly point out and claim the subject matter sufficiently for one of ordinary skill in the art to comprehend the bounds of the claimed invention. Applicants further submit that the

pending claims comply with the written description and enablement requirements of 35 U.S.C. § 112, first paragraph. The test for definiteness of a claim is whether one skilled in the art would understand the bounds of the patent claim when read in light of the specification, and if the claims so read reasonably apprise those skilled in the art of the scope of the invention, no more is required. Credle v. Bond, 25 F.3d 1556, 30 U.S.P.Q.2d 1911 (Fed. Cir. 1994). The legal standard for definiteness is whether a claim reasonably appries those of skill in the art of its scope. In re Warmerdam, 33 F.3d 1354, 31 U.S.P.Q.2d 1754 (Fed. Cir. 1994). The written description requirement of 35 U.S.C. § 112, first paragraph, requires that the disclosure allow persons of ordinary skill in the art to recognize that applicant invented what is claimed. Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 19 U.S.P.Q.2d 1111 (Fed. Cir. 1991). The enablement requirement of 35 U.S.C. § 112, first paragraph, is met if the description enables any mode of making and using the claimed invention. Engel Industries, Inc. v. Lockformer Co., 946 F.2d 1526, 20 U.S.P.Q.2d 1300 (Fed. Cir. 1991). Applicants have amended the pending claims to enhance clarity and respectfully submit that said claims are adequately described and fully enabled by the specification, and furthermore, distinctly delineate the metes and bounds of the claimed subject matter. Applicants will address the Examiner's particular objections and questions *infra* where amendment does not clearly resolve the issue or where explanation or argument is otherwise necessary.

Paragraph 14 of the Office Action was addressed in section B(1) *supra*. Regarding paragraphs 15-17, Applicants have amended the claims to address the Examiner's

specific concerns here. Applicants believe their amendment to the various claims to which the Examiner refers should resolve any issues of indefiniteness.

Regarding claim 2, the data is transmitted in substep (3) of the second step, since the substep recites “transmitting one or more second signals containing . . . said . . . control instructions”, which are defined in substep (2) as including “said selected data”. Regarding the Examiner’s queries on the steps relating to the control of the receiver station, Applicants submit that the steps are not conflicting. The first step of controlling the receiver station relates to presenting the mass medium programming and supplementary output information based on the second signal. The second step of controlling the receiver station relates to outputting subscriber station generated output content as a result of subscriber station reaction to the mass medium programming or supplementary output information. Regarding the Examiner’s comments that the second signals have not been “generated”, Applicants respectfully submit that there is no missing step here. The second signal contains the unit of mass medium programming and the control instructions, both of which were previously positively recited. Regarding the Examiner’s query regarding the “data applicable to . . .” (Office Action, p. 25 at line 4), Applicants have amended the claim to clarify that (a) the second signal contains data, (b) the data is communicated to a processor, (c) at least some of the data is selected and stored to be used to complete or supplement a mass medium programming presentation. The data is “applicable to”, therefore, complete or supplement the received mass medium programming.

Continuing with claim 2, the first and second steps of controlling a receiver station may occur at the same (first) receiver station, or at a first and second receiver stations. The mass medium programming is the same throughout; therefore, Applicants provide antecedent reference in all subsequent use of the term. Regarding the term "information" in line 22, Applicants have amended the claim to clarify that the second recited step of controlling a receiver station may occur at the first, or at a second, receiver station. Therefore, the "inputting of a reaction of a subscriber" occurs in response to a presentation of the mass medium programming and data contained in the second signal(s). If this occurs at the first receiver station, then the presentation is that one recited in the first step of controlling. Alternatively, the reaction may be in response to a separate presentation at a separate, second receiver station, in which case the data (from the second signal) that is selected and presented may be different from that selected and presented at the first station. Regarding the Examiner's query of the phrase "presenting at an output device", Applicants respectfully submit that one of ordinary skill in the art would easily appreciate the concept of presentations of programming and information content at output devices. Applicants disclosure recites numerous embodiments for outputting content, such as monitors, printers, speakers, etc. Regarding the "inputt[ed] information" of line 27 (as filed) of claim 2, Applicants respectfully submit that one of ordinary skill in the art would recognize the inherent limitation to the step that the information is input at the receiver station to receiver station apparatus operative to accept such information.<sup>2</sup>

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<sup>2</sup> The '87 case discloses the concept of local input for reaction information throughout the examples discussed in the specification.



Regarding the Examiner's assertion that the "presentation of line 28 has never been made" (Office Action, p. 25 at lines 9-10), Applicants respectfully submit that one of ordinary skill would appreciate the bounds of the claimed subject matter, including the specific language cited here by the Examiner. The first step of controlling provides for a presentation comprising the mass medium programming and some or all of the data selected from the second signal. The second step of controlling provides for a viewer reaction to such a presentation to cause a receiver station to generate additional (second) information content. And, as noted *supra*, the second step of controlling may occur at the first, or some other, receiver station. Applicants have, therefore, not separately recited the presentation of the second step of controlling, in the good faith belief that to do so would be confusing. The presentation of the second step of controlling a receiver station is clearly recited as a limitation on the element of "inputting information of the reaction of a subscriber". Applicants respectfully submit that one of ordinary skill in the art would comprehend the scope of the claim, as amended, including the limitations contained in substep (1) of the second step of controlling a first or second receiver station.

Regarding the Examiner's comment that the steps of claims 2, 5, 6 and 8 do not recite "processing" in accordance with their preambles, Applicants respectfully submit that the invention of each claim recites a method of signal processing. Webster's II New College dictionary defines "processing", in relevant part, as "a series of actions , changes or functions to achieve an end result". Signal processing would, therefore, encompass methods with "a series of actions, changes or functions to achieve an end

result” that are operative on signals. Applicants respectfully submit that the individual terms of these claims fall within the ambit of signal processing; consider “selecting” data, “controlling” on the basis of signals, “communicating” data, “storing” part or all of received data, “processing” inputted information, “generating” output information content, etc. Applicants further submit that the series of steps for each of said claims, as a whole, clearly constitute methods of signal processing. The input is mass medium programming and data. The outputs are presentations and output information content based on the input. Clearly, this is signal processing. Applicants respectfully request that the rejection of claims 2, 5, 6 and 8 on this basis be withdrawn.

Regarding the Examiner’s queries on claim 3 (Office Action, p. 25 at line 12), the transmitter is at the first or second receiver station of claim 2 which generates the second output information content, as recited in claim 2’s second step of controlling a receiver station. Regarding the Examiner’s objections to the Markush groups in claims 4 and 5, Applicants have amended said claims to address the Examiner’s concerns. In discussing Markush groups, MPEP § 2173.05(h) states that “alternative expressions are permitted if they present no uncertainty or ambiguity with respect to the question of scope or clarity of the claims”. MPEP § 2173.05(h) also states that “process steps may also be claimed by using the Markush style of claiming”. In a process claim, it is sufficient if the members of the Markush group possess a common property which is mainly responsible for their function in the claimed relationship. Id. Applicants respectfully submit that claim 4 recites proper alternative Markush-type elements. The alternative expressions do not create any uncertainty regarding the scope of the claim

and they contain common utilities with respect to each claim's overall subject matter. Claim 4 simply provides that the second output content is output to a user as video, audio or print. They represent different three ways of outputting information to a user.

Applicants have amended claim 5, 6, 7 and 8 to clarify the methods recited therein. Applicants are unclear what Examiner means by "claim 6 has a transmitter receiving" (Office Action, p. 26). Certainly it must be agreed that transmitter stations may be capable of receiving signals. In response to "what outputs the information in claim 5", Applicants' claim 5 recites first output information content that is outputted at a receiver station, and second output information content that is outputted at a receiver station. Applicants respectfully submit that their method claims are not unpatentable for indefiniteness as they presently stand, and submit that reciting specific apparatus for outputting or presenting the information content is unnecessary. Clearly one of ordinary skill in the art with access to the specification would comprehend that information content can be output by various means, such by a monitor, printer, speaker, etc., as discussed above.

Regarding the objection to the term "incorporating", as used in claims 2 and 5, Applicants respectfully submit that one of ordinary skill would appreciate the concept of incorporating data into a control signal to be transmitted to receiver stations. The '87 case specifically addresses the concepts of using instruct and control signals to transmit instructions and information to receiver stations. (See the '87 Specification at p. 358 line 15 and 363 line 31). One of ordinary skill in the art would easily comprehend, therefore, the use of the term "incorporating" in this context.

Regarding the Examiner's apparent objection to some of the claims on the basis of Ex parte Erlich, 3 U.S.P.Q.2d 1011, 1986 Pat. App. LEXIS 13 (BNA 1986), Applicants respectfully submit that the claims, as amended, positively recite active steps. "While we agree with [Applicants] that the claims need not recite all of the operating details, we do find that a method claim should at least recite a positive, active step(s) so that the claim will 'set out and circumscribe a particular area with a reasonable degree of precision and particularity'." Id. Applicants submit that each of the pending claims sets out at least one positive, active step, and that each claim further defines the subject matter with a reasonable degree of precision and particularity. Applicants, therefore, respectfully request that the objection be withdrawn.

Regarding the objection to the specification for failure to provide an enabling disclosure with respect to the term "react" or "reaction" under 35 U.S.C. § 112, first paragraph, and the rejection of claims 2-8 under the same provision, Applicants respectfully submit that the priority disclosure is fully enabling with regards to the objected-to terms. Regarding the term "reaction", Applicants respectfully submit that one of ordinary skill in the art would comprehend the term as used in the phrase "to process a subscriber reaction", as in claim 7. Certainly one of ordinary skill would appreciate the concept of a viewer reaction--such as the placing of an order or input of some data or code-- to some programming. And certainly one of ordinary skill would appreciate the concept of processing a viewer reaction. Moreover, the priority document discloses and enables the concept, e.g. in the discussion of the "Exotic Meals of India" scenario where a program causes a viewer to react to a solicitation by entering

a number. ('87 Specification at pp. 469-478). Applicants respectfully submit the concept is fully enabled by the specification and, therefore, that the rejection should be withdrawn.

### **3. Summary**

Applicants have amended various of the remaining pending claims to enhance clarity and address the Examiner's various objections and rejections. Applicants believe said amendments and the associated remarks overcome the Examiner's various rejections under 35 U.S.C. § 112, first and second paragraphs. Applicants respectfully submit that the subject matter of said claims is adequately described and fully enabled by the priority specification, and that the claims clearly stake out the metes and bounds of the subject matter regarded as the invention. As such, Applicants respectfully request the Examiner to withdraw all present objections and rejections and allow all present claims.

**C. Response to Rejections under 35 U.S.C. § 102 for Lack of Novelty.**

**1. Introduction and Applicable Law.**

The claims of the present application have been amended to further clarify the claimed invention. It is respectfully submitted that the claims in the present application should be allowed because these methods are not disclosed, taught, suggested, or implied by the applied art. For a prior art reference to anticipate in terms of 35 U.S.C. §102, every element of the claimed invention must be identically shown in a single reference. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. Scripps Clinic & Research Foundation v. Genetech, Inc., 927 F.2d 1565, 18 U.S.P.Q.2d 1001, 18 U.S.P.Q.2d 1896 (Fed. Cir. 1991). Absence from a cited reference of any element of a claim negates anticipation of that claim by the reference. Kloster Speedsteel AB v Crucible, Inc., 230 U.S.P.Q. 81 (Fed. Cir. 1986), on rehearing, 231 U.S.P.Q. 160 (Fed. Cir. 1986).

Appellants will further submit that the subject matter of these claims is nonobvious since it is nowhere disclosed, taught, suggested or implied by the cited art. The Examiner meets the burden of establishing a *prima facie* case of obviousness when the teachings of the prior art itself would have suggested the claimed subject matter to a person of ordinary skill in the art. In re Rijckaert, 9 F.3d 1531, 28 U.S.P.Q.2d 1955 (Fed. Cir. 1993). The mere fact that the prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggests the

desirability of the modification. In re Fitch, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

**2. Rejections for Anticipation by Matsumoto, *et. al.*, U.S. Pat. No. 4,245,245.**

Paragraph 20 of the Office Action rejects claims 2-8 as anticipated under 35 U.S.C. § 102 by Matsumoto, *et. al.*, U.S. Pat. No. 4,245,245 (Matsumoto). Matsumoto's "Interactive CATV System" discloses a two way CATV system including central control unit I, repeating transmission network II and terminal units III, wherein the central control unit and terminal units communicate using fixed length, short duration digital frames, using FSK and PSK modulated frequency-division multiplexed downstream and upstream communication channels, respectively. (Matsumoto, figs. 3 and 5). The central control unit "scans" or interrogates individual terminal units in a rapid, sequential fashion to retrieve information regarding terminal station status, including selected channel, polling information, fire/theft alarm, on/off status, etc. (Matsumoto, abstract, col. 12 lines 15-27; col. 18 lines 27-68). The downstream messages including synchronizing header bits, group address, private address and control signal bits. (Matsumoto, col. 3 lines 40-50; col. 18 lines 17-26). The recovered status information can be used to monitor pay usage and generate automatic billing records. (Matsumoto, col. 6 lines 34-39). The central station can issue pay channel inhibit commands to prevent viewing of any one of the four pay channels. (Matsumoto, col. 17 lines 45-50). In response to interrogations, the central station stores record information including the status data and private address. (Matsumoto, col. 18 lines 54-68). The interrogation

process is conducted terminal by terminal, one by one. (Matsumoto, col. 19 lines 7-19). The terminal devices store only their present status, which must be frequently and continuously queried in order to create an accurate record of pay channel usage. (Matsumoto, col. 19 lines 43-68). Once a subscriber changes channels, then the stored status information changes to reflect the new status. (Matsumoto, col. 19 lines 61-65). Similarly, polling information is retained only long enough to ensure collection by the central station, i.e. for "longer than one cycle of polling and shorter than two cycles of polling the entire system". (Matsumoto, col. 20 lines 51-56).

Amended claim 2 is directed to a method of signal processing in a network, and essentially recites three steps of controlling stations. The three steps of controlling are recited as follows:

(1) "transmitting a first signal" that "control[s] a transmitter station [thereby], including . . . selecting mass medium programming . . . selecting data and incorporating [it] into one or more control instructions . . . and . . . transmitting one or more second signals containing . . . [the] mass medium programming [and] control instructions";

(2) "controlling a first receiver station . . . [based on the transmitted second signals], including . . . communicating data contained in [the] second signals to a processor . . . selecting at least some of said data to complete or supplement said mass medium programming . . . storing said at least some of said data . . . presenting at one or more output devices [the] mass medium programming and first output information



content [serving] to complete or supplement said mass medium programming and [which is] based on said at least some of said data”;

(3) “controlling said first or a second receiver station [based on the transmitted second signals], including . . . inputting the reaction of a subscriber to a presentation [of] said mass medium programming [or] data contained in [the] second signals . . . generating second output information content by processing said inputted information . . . outputting said generated second output information content”.

Applicants respectfully submit that amended claim 2 is novel over the cited art of Matsumoto since the claim contains elements absent from the reference. The subject matter of claim 2 is directed to a method of signal processing in a network of stations, whereby a first signal controls a transmitter station to create a second signal containing programming and data, which will further control a downstream receiver station and form the basis for a presentation of the mass medium programming and “first information output content” which is based on the data. The second control signal is also effective at that same first receiver station, or a second one, to generate second output content in response to subscriber input.

Matsumoto discloses control signals containing synch header data, address data and control signals to interrogate the status of individual stations. However, Matsumoto does not disclose (1) a transmitter station receiving and coming under the control of a first signal to transmit a second signal containing data and programming. Matsumoto’s central unit *controls*; it is not *controlled*. Nor does Matsumoto disclose (2) controlling a first receiver station on the basis of the second signal, in order to select

data to form the basis for a presentation comprising the mass medium programming and “first output content”, based on the data, which completes or supplements the former. Matsumoto provides for transmitting programming and interrogation signals to terminal units III. Interrogation signals cause the addressed terminal unit to report back its status, as described in the summary. Interrogation signals do not carry data. They do not carry data which is selected to form the basis for some output to supplement or complete a mass medium programming presentation. Applicants respectfully submit that Matsumoto clearly does not disclose--or even suggest or imply--these elements of amended claim 2. Applicants respectfully submit that the claim is novel over Matsumoto and, as such, request that the rejection be withdrawn.

Regarding the Examiner’s assertion that “the first signal is from the subscribing receiver to select a program” (Office Action, p. 28), Applicants respectfully traverse this characterization of Matsumoto. In claim 2, the first signal is received at the transmitter station. In Matsumoto, the terminals report back status information via the PSK upstream channel, but there is no disclosure of terminals selecting a program by transmitting a signal upstream to the central unit.<sup>3</sup> Moreover, the status data that is transmitted upstream is just that, status data; it does not cause central unit I to create a second signal with the aforementioned functionality at a receiver station/terminal. There is simply no suggestion of Matsumoto’s central unit I sending a “second signal” containing program and data, which will control a receiver station to render a

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<sup>3</sup> This is why Matsumoto’s scheme requires repeated, periodic interrogation of terminal station status.

presentation of the program and supplemental/completion output content based on the data. Applicants respectfully reiterate their request that the rejection be withdrawn.

Applicants submit that claims 3 and 4, as dependent upon claim 2, are likewise patentable over the cited art.

Amended claim 5, similar to claim 2, is directed to a system of processing signals in a network, and includes the elements of: (1) "receiving a first signal at a transmitter station"; (2) "selecting mass medium programming in response. . ."; (3) "selecting data and incorporating said selected data into . . . control instructions [which are effective at a receiver station to present the mass medium programming and first output information content to complete or supplement the programming] . . ."; and (4) transmitting second signal[s] "containing [the] mass medium programming and [the] control instructions". Applicants respectfully reiterate the remarks regarding claim 2 *supra*. Matsumoto does not disclose the transmitter station (central control unit) receiving a first signal, nor selecting mass medium programming and data in response. Matsumoto does not disclose the transmitter station (central control unit) sending a second signal containing data and programming, whereby the second signal will control a receiver station to provide a presentation of the programming and output content based on the data in order to complete or supplement the former. Applicants respectfully request that the rejection be withdrawn.

With regard to claim 5, the Examiner asserts that the "signal received at 17 selects a program and is in response to a viewer reaction signal initiated by an interrogation control signal just like is claimed". (Office Action, p. 29). Applicants respectfully

traverse this reading of Matsumoto. The signal received at PSK receiver 17 is the terminal status data, which occurs in response to the FSK downstream interrogation command. The signal received at 17, therefore, does not select a program. It is merely status data. It does not cause central unit I to do anything other than assemble records for billing. It does not cause the central unit to create a second signal to be transmitted back to the receiver station with the aforementioned functionality, etc. Applicants respectfully reiterate their request that the rejection of claim 5 be withdrawn.

Independent claims 6-8 are similar to claim 5. Applicants respectfully reiterate their previous remarks as they relate to these claims, and request that the rejection be withdrawn.

Independent claim 9 is directed to a method of enabling a television or radio storage device to deliver programming, and includes the elements of: (1) "receiving a signal containing television or radio programming [having] an identification datum and a programming element which is incomplete as regards a class of data"; (2) "communicating said signal . . . to [one or more] storage locations"; (3) "storing said signal . . ."; (4) storing an "intermediate generation set [or] program instruction set . . . [including part of a control signal which designates the] programming element [or said] class of data and which upon command is operative to complete said incomplete programming element", thereby enabling the storage device to "deliver a complete programming presentation based on user input".

Applicants respectfully submit that the method of claim 9 is patentable over the cited art of Matsumoto. Matsumoto discloses a CATV environment including a central

unit and terminal stations, wherein the central unit can rapidly, and serially, interrogate individual terminal units for their status regarding channel tuned, on/off, etc.

Matsumoto does not disclose, suggest or imply the element of storing an intermediate generation set or program instruction set with some programming having an incomplete program element, where the former is effective to complete the programming element. Applicants submit that amended claim 9 is patentable over the cited art, and respectfully request allowance of the claim.

### **3. Summary**

Applicants respectfully submit that they have overcome all rejections for lack of novelty. Applicants have amended the claims to enhance clarity, and respectfully submit the rejected claims are now in a condition for allowance. Applicants, therefore, respectfully request that the rejections under 35 U.S.C. § 102 be withdrawn and the claims permitted to issue

**E. Response To Rejection Based On MPEP Section 804 (II)(B)(2)**

As to the Office Action's rejection of Applicants' claim under a non-statutory non-obvious type of double patenting, Applicants strongly traverse the Examiner's double patenting rejection on three separate grounds which are set forth in the reply brief for Serial No. 08/113,329 (Atty. Docket No. 05634.008), incorporated herein by reference. For the sake of brevity, these arguments will not be set forth herein; the Examiner is respectfully directed to the above-mentioned reply brief.

The claims in the present application are distinct from the claims in the Harvey patents. As previously mentioned, the Office Action states that the independent and distinct standard was the main factor in the Schneller court's determination that the double patenting rejection should be affirmed. The Office Action has misinterpreted this phrase. This phrase means independent 'or' distinct. MPEP (6th ed.) § 802.01. The MPEP defines independent as meaning "that there is no disclosed relationship between the two or more subjects disclosed" and that they are not connected. The MPEP defines the term distinct as meaning that "two or more subjects disclosed are related . . . but are capable of separate manufacture, use, or sale as claimed . . . ." Two or more subjects cannot then be unrelated, independent, and also related, and thus distinct. Analyzing the PTO's cited representative claims referenced in the Office Action, the claims of the present application are clearly distinct from the claims in the patents and therefore the claims in the present application are patentable. Although not required, Applicants will analyze the claims of the present application with respect to the designated

representative claims of Harvey U.S. Patents 4,694,490; 4,704,725; 4,965,825 and 5,109,414.

i. **First representative claims, U.S. patent 4,694,490, claim 7 covering present application claim 2.**

Patent 4,694,490, claim 7 claims a method of communicating television program material, said material including a video signal containing a television program and an instruct-to-overlay signal, to multiple receiver stations. The video signal is received and the instruct-to-overlay signal detected and processed by a computer. The computer generates and transmits its overlay video signals to a television receiver which presents a combined display of the television program and overlay video signals, said display specific to a specific user. Present application claim 2 relates to a method of signal processing in a network, including the element of a second signal with data and mass medium programming which causes a receiver station to process some user input and generate and output information content in response. Patent claim 7 does not disclose the element a signal causing a receiver station to process user input and output information content. Patent claim 7 does not disclose the concept of encoding an instruct signal to translate it to a control signal. Patent claim 7 does not cover the subject matter of application claim 2. The two claims are capable of separate manufacture, use, and sale as claimed. These two inventions are distinct.

<b>U.S. patent 4,694,490, claim 7</b>	<b>Present application claim 2 (amended)</b>
In a method of communicating television program material to a multiplicity of receiver stations each of which includes a television receiver and computer, the computers being adapted to generate and transmit overlay video signals, to their associated television receivers, said overlay signals causing the display of user specific information related	2. (Twice Amended) A method of signal processing in a network, said method comprising the steps of: transmitting a first signal to at least one of a plurality of stations; controlling a transmitter station in said network on the basis of said first signal, including: selecting of mass medium programming;

to said program material, and with at least some of said computers being programmed to process overlay modification control signals so as to modify the overlay video signals transmitted to their associated receivers, each of said computers being programmed to accommodate a specific user application, and wherein a video signal containing a television program signal and an instruct-to-overlay signal are transmitted to said receiver stations, the steps of:

- (1) receiving said video signal at a plurality of receiver stations and displaying said program material on the video receivers of selected ones of said plurality of receiver stations
- (2) detecting the presence of said instruct-to-overlay signal at said selected receiver stations at a time when the corresponding overlay is not being displayed, and coupling said instruct-to-overlay signal to the computers at said selected receiver stations, and causing the computers at said selected receiver stations to generate and transmit their overlay video signals to their associated television receivers in response to said instruct-to-overlay signal, thereby to present a combined display at the selected receiver stations consisting of the television program and the related computer generated overlay, the overlays displayed at a multiplicity of said receiver stations being different, with each display specific to a specific user.

(2)

(3)

selecting data and incorporating said selected data into one or more control instructions; and

transmitting one or more second signals containing said mass medium programming and said one or more control instructions;

controlling a first receiver station in said network on the basis of said transmitted one or more second signals, including:

communicating data contained in said one or more second signals to a processor;

selecting at least some of said data to complete or supplement said mass medium programming;

storing said at least some of said data; and

presenting at one or more output devices said mass medium programming and first output information content, said first output information content serving to complete or supplement said mass medium programming and being based on said at least some of said data;

controlling said first or a second receiver station on the basis of said transmitted one or more second signals, including:

inputting information of the reaction of a subscriber to a presentation of at least one of said mass medium programming and data contained in said one or more second signals;

generating second output information content by processing said inputted information of the reaction of a subscriber; and

outputting said generated second output information content.



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ii.     **Second representative claims, U.S. patent 4,704,725,  
claim 3 covering present application claim 2.**

Patent 4,704,725, claim 3 claims a method of communicating output signals comprising data and user specific signals at a multiplicity of receiver stations from computers to output devices. At least some of the computers can modify the user specific signals by processing modification control signals. The computers communicate the data and user specific signals in response to a received and detected instruct-to-transmit signal. Present application claim 2 relates to a method of signal processing in a network, including the element of a second signal with data and mass medium programming which causes a receiver station to process some user input and generate and output information content in response. Patent claim 3 does not disclose the element a signal causing a receiver station to process user input and output information content. Patent claim 3 does not disclose the concept of encoding an instruct signal to translate it to a control signal. Patent claim 3 does not cover the subject matter of application claim 3. The two claims are capable of separate manufacture, use, and sale as claimed. These two inventions are distinct.

<b>U.S. patent 4,704,725, claim 3</b>	<b>Present application claim 2 (Amended)</b>
A method of communicating data to a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific signals to one or more associated output devices,	2. (Twice Amended)     A method of signal processing in a network, said method comprising the steps of: transmitting a first signal to at least one of a plurality of stations; controlling a transmitter station in

with at least some of said computers being programmed to process modification control signals so (1b) to modify the user specific signals transmitted to their associated output (2) devices, each of said computers being programmed to accommodate a special user application, comprising the steps (3) of:

transmitting an instruct-to-transmit signal to said computers at a time when the corresponding user specific information is not being transmitted to an output device;

detecting the presence of said instruct-to-transmit signal at selected receiver stations and coupling said instruct-to-transmit signal to (1) the computers associated with said selected stations, and

causing said last named computers to generate and transmit (2) their user specific signals to their associated output devices in response to said instruct-to-transmit signal, thereby to (1a) transmit to the selected output devices an output signal comprising said data (3a) and said related user specific signals, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.

(1)

(2)

said network on the basis of said first signal, including:

selecting of mass medium programming;

selecting data and incorporating said selected data into one or more control instructions; and

transmitting one or more second signals containing said mass medium programming and said one or more control instructions;

controlling a first receiver station in said network on the basis of said transmitted one or more second signals, including:

communicating data contained in said one or more second signals to a processor;

selecting at least some of said data to complete or supplement said mass medium programming;

storing said least some of said data; and

presenting at one or more output devices said mass medium programming and first output information content, said first output information content serving to complete or supplement said mass medium programming and being based on said at least some of said data;

controlling said first or a second receiver station on the basis of said transmitted one or more second signals, including:

inputting information of the reaction of a subscriber to a presentation of at least one of said mass medium programming and data contained in said one or more second signals;

generating second output information content by processing said inputted information of the reaction of a subscriber; and

(3)

outputting said generated  
second output information content.

**iii. Third representative claims, U.S. patent 4,965,825,  
claim 24 covering present application claim 2.**

Patent 4,965,825, claim 24 claims a method of generating user specific output information at a multiplicity of receiver stations. Each receiver station is programmed with a special user application and has a computer adapted to generate user specific output information. Each receiver station has an output device to which its computer transmits a user specific signal. At a time when the user specific output information does not exist, an instruct-to-generate signal is transmitted to the receiver stations. In response to the instruct-to-generate signal, the computers generate and transmit to the output devices the user specific output information in user specific signals which are different, "with each output signal specific to a specific user". Present application claim 2 relates to a method of signal processing in a network, including the element of a second signal with data and mass medium programming which causes a receiver station to process some user input and generate and output information content in response. Patent claim 24 does not disclose the element a signal causing a receiver station to process user input and output information content. Patent claim 24 does not disclose the concept of encoding an instruct signal to translate it to a control signal. Patent claim 24 does not cover the subject matter of application claim 2. The two claims are capable of separate manufacture, use, and sale as claimed. These two inventions are distinct.

**U.S. patent 4,965,825, claim 24**

In a method of generating computer output at a multiplicity of receiver stations each of which includes a computer adapted to generate and transmit user specific output information content and user specific signals to one or more associated output devices, with at least one or more associated output devices, with at least some of said computers being programmed to process modification control signals so as to modify said computers' method of processing data and generating output information content, each of said computers, being programmed to accommodate a special user application, the steps of:

transmitting an instruct-to-generate signal to said computers at a time when corresponding user specific output information content does not exist, and causing said last named computers to generate their user specific output information content in response to said instruct-to-generate signal, thereby to transmit to each of their associated output devices an output information content and the user specific signal of its associated computer, the output signals at a multiplicity of said output devices being different, with each output signal specific to a specific user.

(1)

**Present application claim 2 (Amended)**

2. (Twice Amended) A method of signal processing in a network, said method comprising the steps of:  
transmitting a first signal to at least one of a plurality of stations;  
controlling a transmitter station in said network on the basis of said first signal, including:  
selecting of mass medium programming;  
selecting data and incorporating said selected data into one or more control instructions; and  
transmitting one or more second signals containing said mass medium programming and said one or more control instructions;  
controlling a first receiver station in said network on the basis of said transmitted one or more second signals, including:  
communicating data contained in said one or more second signals to a processor;  
selecting at least some of said data to complete or supplement said mass medium programming;  
storing said least some of said data; and  
presenting at one or more output devices said mass medium programming and first output information content, said first output information content serving to complete or supplement said mass medium programming and being based on said at least some of said data;  
controlling said first or a second receiver station on the basis of said transmitted one or more second signals, including:  
inputting information of the

(2)

(3)

reaction of a subscriber to a presentation of at least one of said mass medium programming and data contained in said one or more second signals;

generating second output information content by processing said inputted information of the reaction of a subscriber; and

outputting said generated second output information content.

**iv. Fourth representative claims, U.S. patent 5,109,414, claim 15 covering present application claim 2.**

Patent 5,109,414, claim 15 claims a signal processing system which receives data from a data source and outputs the data to a matrix switch and a detector, control signals are detected within the received data and stored for further processing, and a processor controls the directing functions of (1) the matrix switch which receives the data as input and can direct selected portions of the data to a data transmission means and (2) the device which stores and transfers the control signals to the processor. Present application claim 2 relates to a method of signal processing in a network, including the element of a second signal with data and mass medium programming which causes a receiver station to process some user input and generate and output information content in response. Patent claim 15 does not disclose the element a signal causing a receiver station to process user input and output information content. Patent claim 15 does not disclose the concept of encoding an instruct signal to translate it to a control signal. Patent claim 15 does not cover the subject matter of application claim 2. The two claims are capable of separate manufacture, use, and sale as claimed. These two inventions are distinct.

**U.S. patent 5,109,414, claim 15**

In a signal processing system,  
a receiver/distribution means for receiving data from a data source and for outputting said data to a matrix switch means and a control signal detector means,  
a matrix switch means for receiving said data from said receiver/distributor means and for directing selected portions of said received data to a data transmission means,  
a control signal detector means for detecting control signals respecting said data and transferring said control signals to a storage/transfer means, said control signal means being configured to detect said control signals at a predetermined location within said data,  
a storage/transfer means for receiving and storing said control signals and for transferring at least a portion of said control signals to a processor means for further processing, and  
a processor means for controlling the directing functions of said matrix switch means and the transfer functions of said storage/transfer means based on instructions contained in said control signals.

([2]3)

(3)

**Present application claim 2 (Amended)**

2. (Twice Amended) A method of signal processing in a network, said method comprising the steps of:  
transmitting a first signal to at least one of a plurality of stations;  
controlling a transmitter station in said network on the basis of said first signal, including:  
selecting of mass medium programming;  
selecting data and incorporating said selected data into one or more control instructions; and  
transmitting one or more second signals containing said mass medium programming and said one or more control instructions;  
controlling a first receiver station in said network on the basis of said transmitted one or more second signals, including:  
communicating data contained in said one or more second signals to a processor;  
selecting at least some of said data to complete or supplement said mass medium programming;  
storing said least some of said data; and  
presenting at one or more output devices said mass medium programming and first output information content, said first output information content serving to complete or supplement said mass medium programming and being based on said at least some of said data;

- controlling said first or a second receiver station on the basis of said transmitted one or more second signals, including:
- (1) inputting information of the reaction of a subscriber to a presentation of at least one of said mass medium programming and data contained in said one or more second signals;
  - (2) generating second output information content by processing said inputted information of the reaction of a subscriber; and
  - (3) outputting said generated second output information content.

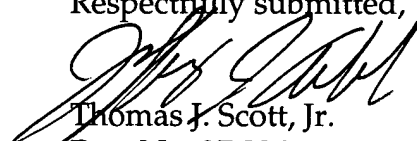
### III. CONCLUSION

In accordance with the foregoing it is respectfully submitted that all outstanding objections are rejections have been overcome and/or rendered moot. Further, that all pending claims patentably distinguish over the prior art, taken in any proper combination. Thus, there being no further outstanding objections or rejections, the application is submitted as being in a condition for allowance, which action is earnestly solicited.

If the Examiner has any remaining informalities to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for telephone interview to discuss resolution of such informalities.

Date: August 4, 1997  
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